

**APPLICATION OF HUMAN FACIAL FEATURES RECOGNITION TO
AUTOMOBILE SECURITY AND CONVENIENCE**

ABSTRACT OF THE DISCLOSURE

An imaging system (50) for providing vehicle security and convenience features that employs face recognition software to identify and track a person. The system (50) employs infrared emitters (30) that emit an infrared signal along a predetermined field-of-view, and an infrared sensor (34), such as a CMOS sensor used as a video signal array, that receives reflected infrared illumination from objects in the field-of-view. A processor (52) including the face recognition software, is employed to detect human faces to identify and track the person. Once a face is detected, it can be compared to a data base to identify the person. Various applications for the imaging system (50) to provide driver convenience and security include determining driver identification as the driver approaches the vehicle, determining if a potential thief is in the vehicle by face recognition, providing driver seat adjustment, rear and side mirror adjustment and steering wheel adjustment, providing vehicle speed control, automatically starting the vehicle, etc.